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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,521	10/07/2005	Zoran Janosevic	020500	6158
23696	7590	12/15/2006		
QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER NGUYEN, TUAN HOANG	
			ART UNIT 2618	PAPER NUMBER

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/529,521		JANOSEVIC ET AL.	
	Examiner		Art Unit	
	Tuan H. Nguyen		2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 4-7, 12-13, 15-20, and 26-30 are objected to under 37 CFR 1.75 (c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-7, 12-13, 15-20, and 26-30 have not been further on the merits.

Claim Rejections - 35 USC § 112

3. Claims 31-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 31 and 32 are indefinite because they are failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 5, 8-11, 14, 16, 18, and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Henry Raymond, C., Jr. (PCT International Publication Number WO 01/26259, hereinafter "Henry").

Consider claim 1, Henry teaches a method of calibrating a transmitter circuit having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal, the method comprising: defining a set of multiple signal values for the first control signal (see fig. 7 page 14 line 17 through page 15 line 8); setting the first control signal to a level corresponding to a signal value from the set of multiple first control signal values (see fig. 7 page 14 line 17 through page 15 line 8); adjusting the second control signal to cause the transmitter to operate in a desired manner (page 12 lines 9-17); measuring power in a signal transmitted by the transmitter while operating in the desired manner (page 14 lines 17-23); and repeating the setting, adjusting and measuring for each signal value in the set of

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multiple first control signal values (page 12 lines 9-17).

Consider claim 2, Henry further teaches recording data representing the measured power against the signal value from the set of multiple first control signal values (page 10 lines 21-24).

Consider claim 8, Henry teaches a method of calibrating a transmitter circuit having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal, the method comprising: defining a set of multiple signal values for the first control signal (see fig. 7 page 14 line 17 through page 15 line 8); defining a set of multiple power values representing power in a signal transmitted by the transmitter (page 15 lines 1-8); setting the first control signal to a level corresponding to a signal value from the set of multiple first control signal values (see fig. 7 page 14 line 17 through page 15 line 8); selecting a power value from the defined set of multiple power values (see fig. 7 page 14 line 17 through page 15 line 8); adjusting the second control signal to cause the transmitter to transmit a signal with a power corresponding to the selected power value (page 12 lines 9-17); and repeating the selecting and adjusting for each power value in the set of multiple power values (page 12 lines 9-17).

Consider claims 5 and 16, Henry further teaches the transmitter circuit comprises a first amplifier and a second amplifier, and the first characteristic is a characteristic of

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the first amplifier and the second characteristic is a characteristic of the second amplifier (see fig. 4 page 9 lines 10-18 and page 10 lines 9-13).

Consider claim 9, Henry further teaches recording data representing the second control signal against the power in the transmitted signal (page 10 line 21 through page 11 line 2).

Consider claim 10, Henry further teaches repeating the setting, adjusting, selecting and repeating for each signal value from the set of multiple first control signal values (page 12 lines 9-17).

Consider claim 11, Henry further teaches recording the data representing the second control signal and the power in the transmitted signal against the signal value from the set of multiple first control signal values (page 10 lines 21-24).

Consider claim 14, Henry further teaches the set of multiple signal values for the first control signal is defined by using previously created data representing transmitted signal power values against first control signal values (page 12 lines 9-17).

Consider claim 18, Henry further teaches the second amplifier comprises a conditioning amplifier, and the characteristic controlled by the second control signal

comprises the gain of the conditioning amplifier (page 14 lines 8-16).

Consider claim 21, Henry teaches a transmitter comprising: a receiver for receiving power data specifying a power value (page 11 lines 15-23); an amplifier having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal (page 12 lines 1-8); a store for storing data representing power values, corresponding first control signal values and corresponding second control signal values (page 12 lines 1-8); a controller coupled to the receiver and the store and responsive to the received power data for generating from the data stored in the store a first control signal for controlling the first characteristic and a second control signal for controlling the second characteristic (page 11 line 15 through page 12 line 8).

Consider claim 22, Henry further teaches the amplifier comprises a first amplifier and a second amplifier, and the first characteristic is a characteristic of the first amplifier and the second characteristic is a characteristic of the second amplifier (page 14 lines 8-16).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 6-7, 12-13, 15, 17, 19-20, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry in view of Pehlke (U.S. PAT. 6,614,309).

Consider claim 3, Henry teaches a method of calibrating a transmitter circuit having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal.

Henry does not explicitly show that the data is recorded as entries in a look-up table.

In the same field of endeavor, Pehlke teaches the data is recorded as entries in a look-up table (col. 4 line 64 through col. 5 line 14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, the data is recorded as entries in a look-up table, as taught by Pehlke, in order to provide a bias controller that uses closed-loop control techniques to adjust a generated bias voltage up or down to make the supply current into the power amplifier circuit under quiescent conditions substantially match the target quiescent current value.

Consider claim 6, Pehlke further teaches the first amplifier comprises a power amplifier and the characteristic controlled by the first control signal comprises supply

current to the power amplifier (col. 4 lines 54-63).

Consider claim 7, Henry further teaches the second amplifier comprises a conditioning amplifier, and the characteristic controlled by the second control signal comprises the gain of the conditioning amplifier (page 14 lines 8-16).

Consider claim 12, Pehlke further teaches the data representing the second control signal and the power in the transmitted signal is stored in a separate list for each signal value from the set of multiple first control signal values (col. 7 lines 22-38).

Consider claim 13, Pehlke further teaches the data in each separate list is recorded as entries in a respective look-up table (col. 4 line 64 through col. 5 line 14).

Consider claim 15, Henry further teaches the previously created data is used by selecting a power value from the defined set of multiple power values and calculating a signal value for the first control signal (page 12 lines 9-17).

Consider claim 17, Pehlke further teaches the first amplifier comprises a power amplifier and the characteristic controlled by the first control signal comprises supply current to the power amplifier (col. 4 lines 54-63).

Consider claim 19, Pehlke further teaches the previously created data is created (col. 4 lines 54-63).

Consider claim 20, Pehlke further teaches storing a set of starting values for the second control signal (col. 4 line 64 through col. 5 line 14); and using the set of starting values when adjusting the second control signal to cause the transmitter to transmit a signal with a power corresponding to the selected power value (col. 4 line 64 through col. 5 line 14).

Consider claim 23, Pehlke further teaches the store comprises a look-up table (col. 4 line 64 through col. 5 line 14); the controller comprises an analog-to-digital converter coupled to the amplifiers (col. 5 lines 40-56); the controller is arranged to apply the received power data to the look-up table (col. 4 line 64 through col. 5 line 14); the look-up table is arranged to respond to the application of received power data by supplying data to the analog-to-digital converter (col. 4 line 64 through col. 5 line 14); and the analog-to-digital converter is arranged to respond to the supplied data by outputting the first control signal to the first amplifier and the second control signal to the second amplifier (col. 5 lines 40-56).

Consider claim 24, Pehlke further teaches the controller is arranged to output the first control signal values and the second control signal values directly to the analog-to-

digital converter (col. 5 lines 40-56).

Consider claim 25, Pehlke further teaches the controller comprises a processor for: processing data from the store to produce data defining the first control signal and the second control signal (col. 2 line 62 through col. 3 line 4); and outputting the same to the analog-to-digital converter (col. 5 lines 40-56).

Consider claim 26, Pehlke further teaches the store comprises: a first look-up table for storing data representing power values and corresponding first control signal values (col. 4 line 64 through col. 5 line 14); and a second look-up table for storing data representing power values and corresponding second control signal values (col. 4 line 64 through col. 5 line 14).

Consider claim 27, Pehlke further teaches the store comprises multiple second look-up tables, one for each value in a set of first control signal values (col. 4 line 64 through col. 5 line 14); and the processor is arranged to use the specified power data to produce a first control signal value from the first look-up table and to use the thus produced first control signal value to identify a second look-up table for use in producing a second control signal value depending on the specified power data (col. 4 line 64 through col. 5 line 14).

Consider claim 28, Pehlke further teaches the first amplifier comprises a power amplifier and the characteristic controlled by the first control signal comprises supply current to the power amplifier (col. 4 lines 54-63).

Consider claim 29, Henry further teaches the second amplifier comprises a conditioning amplifier, and the characteristic controlled by the second control signal comprises the gain of the conditioning amplifier (page 14 lines 8-16).

Consider claim 30, Pehlke further teaches the data in the store is generated (col. 4 line 64 through col. 5 line 14).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henry in view of Toki et al. (U.S PUB. 2002/0021687, hereinafter "Toki").

Consider claim 4, Henry teaches a method of calibrating a transmitter circuit having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal.

Henry does not explicitly show that the desired manner is defined by parameters including an adjacent channel leakage ratio range.

In the same field of endeavor, Toki e teaches the desired manner is defined by parameters including an adjacent channel leakage ratio range (page 5 [0072]).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, the desired manner is defined by parameters including an adjacent channel leakage ratio range, as taught by Toki, in order to provide accurately detect power that leaks into an adjacent channel, so that information about the detected leakage power can be used for control of transmission power.

Conclusion

9. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

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Randolph Building

401 Dulany Street

Alexandria, VA 22313

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information Consider the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Nguyen
Examiner
Art Unit 2618

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12/11/06

QUOCHIE B. VUONG
PRIMARY EXAMINER